Emma Strauss Kranich

+1(518) 380-0317 • emmakranich@gmail.com • https://emma-kranich.github.io

EDUCATION

Cornell University, College of Engineering, Ithaca, NY   *Expected May 2022*
GPA: 4.1 (out of 4.3), *Candidate for Bachelor of Science in Electrical and Computer Engineering with Minor in Biomedical Engineering*
Honors: Dean's List
Courses: Introduction to Circuits, Digital Logic and Computer Organization, Cellular and Molecular Biology

Bethlehem Central High School, Delmar, NY   *Graduated June 2018*
GPA: 97 (unweighted), **SAT:** 1580, **ACT:** 35
Honors: Art Honor Society, Math Honor Society, National Honor Society
Awards: National Merit Finalist, University of Rochester Bausch + Lomb Award, New York State Scholarship for Academic Excellence

PROFESSIONAL EXPERIENCE

Erickson Lab, Cornell University   *January 2019 – Present*
Research Assistant
- Design and create new medical devices integrating H.E.R.M.E.S device for blood-plasma separation at the point-of-need
- Develop ways to utilize PCR without the need to separate further particles out of erythrocyte depleted blood
- Engineer solution for the transport of blood samples that maintains analyte concentrations
- Collaborate with Ph.D. student to create point-of-need sepsis diagnostic and gonorrhea antibiotic resistivity testing devices

International Genetically Engineered Machine (iGEM) Team, Cornell University   *October 2018 – Present*
Product Development Lead
- Built boat with automatic sampler (given GPS locations) and engineered aptamer to test water for toxins (2019 project)
- Constructed bioreactor containing bacteria with engineered MLR gene to remove toxins if found (2019 project)
- Lead PD team to design and manufacture products throughout school year and summer in order to solve problems related to medicine, the environment, human and animal health; compete annually at iGEM Giant Jamboree in Boston

Neural Stem Cell Institute, Rensselaer, NY   *May 2017 – August 2017*
Neuroscience Intern
- Assisted lab staff in developing regenerative stem cell therapies for diseases of the central nervous system
- Improved experience with lab techniques such as staining, microscopy, gel electrophoresis, feeding cells, and cleaning cells

Muhlenberg Brain Camp, Muhlenberg College, PA   *July 2017 – July 2017*
Research Assistant
- Selected for free week-long program; conducted research with a professor on memory consolidation and PTSD
- Utilized virtual reality to study working memory consolidation, demonstrated that memories can be hidden from retrieval without being erased by using a visuospatial distractor during the consolidation phase
- Research picked up by Muhlenberg students to test after preparing poster presentation and speaking at symposium

EXTRACURRICULAR

Theta Tau Professional Engineering Fraternity   *January 2019 – Present*
Philanthropy Chair
- Underwent eight-week new member education training that focused on professional development and leadership skills
- Organize philanthropy events for fraternity to participate in, totaling to 130 hours last semester (Fall 2019)
- Engage with peers in workshops such as resume critiques and mock interviews

Society of Women Engineers (SWE)   *September 2018 – Present*
Alumni Relations Committee Member
- Establish database for student-alumni connections, create mentor-mentee matches based on professional interests
- Meet to discuss opportunities for professional development as well as foster relationships among fellow students

Fibrodysplasia Ossificans Progressiva (FOP) Charity Events   October *2015 – March 2017*
- Orchestrated logistics for two charity events (2015 Awake for a Cure and 2017 Cheers for a Cure) for FOP research
- Raised $76,000 for international FOP research center at the University of Pennsylvania

Other Involvements   *September 2014 – Present*
- **Athletics** Theta Tau Intramural Chair (Fall 2019), Bethlehem Central High School Freshman and JV soccer captain
- **Music** Received 94 on most recent piano NYSSMA (Level 6), BCHS Wind Ensemble and Jazz Band first chair saxophone
- **TA/Tutoring** Digital Logic and Computer Organization Teaching Assistant, Calculus and Chemistry peer tutor, help students review class material and complete problem sets, supervise and assist during labs

SKILLS AND INTERESTS

Technical Skills: Autodesk Fusion, Python, Circuit analysis, Java, Verilog, MATLAB (basic), HTML & CSS (basic), PCR
Class Experience: Verilog, Microprocessor Design, Computer Architecture, FPGA Boards, Active and Passive Filters
Interests: Hiking, Piano, Running, Painting, Skiing, Baking, Traveling, Sudoku, Crime Shows, Soccer, Poetry, Neuroscience